Clever Little Box.

'Can they hear you at the back?'

IRX Pack F
Infrared Soundfield System
User Manual

Soundfield
Classroom Voice Reinforcement

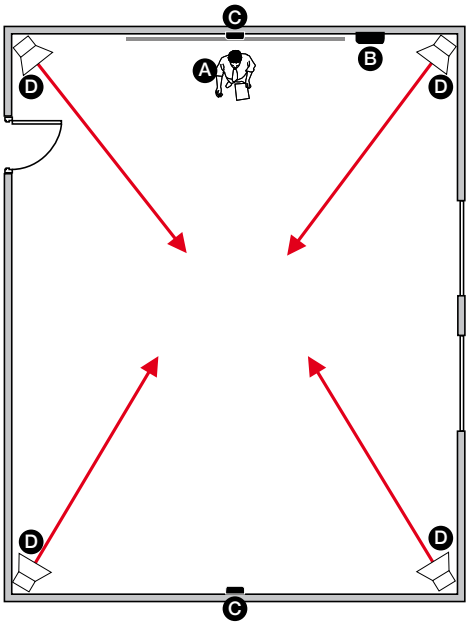
What is a Soundfield System?

‘Soundfield’ or a ‘Soundfield Voice Reinforcement System’ is essentially the integration of a mini-PA system in the classroom.

The inclusion of a Soundfield System in the classroom will raise a teacher’s voice above the ambient noise in noisy or lively classroom environments. Soundfield voice reinforcement will provide even coverage throughout the whole room without the need to shout or raise one’s voice. This will provide significant benefits for teacher/pupil communication and understanding.

Your ‘Clever Little Box’ Soundfield System uses the latest infrared technology. **Please read this manual carefully as it contains important information on using and maintaining the performance of the equipment.**

This Soundfield System has been designed with the minimum of user controls. Once set up by the installer it is very simple and flexible to use. A number of different facilities and variants may be installed as part of a system depending on the requirements of particular installations. They are all covered in this manual but may not all be included as part of your system.



A) Teacher-worn Infrared Microphone/Transmitter
B) IRX Infrared Receiver/Amplifier
C) Infrared Sensors
D) Studio 2 Wallmount Loudspeakers

• IRX Wall Mount IR Receiver/Amplifier

The benefits of Soundfield in your classroom

All children benefit from the improved speech clarity of a Soundfield System. Academic improvements are consistently noted in:

- Task behaviour
- Understanding of instructions
- Attentiveness
- Less repetition required
- Better attendance
- Improved verbal recognition
- Reduced voice strain

The inclusion of Soundfield Voice Reinforcement in the classroom provides wide ranging benefits to mainstream and hard of hearing students, as well as teachers.

Pupils

In addition to the above outstanding benefits, pupils also benefit from:

- More effective deciphering of language in early learning years
- Better understanding of teachers' voice for 'second language' learning
- Assists temporary hearing deficiency, common in early learning years

Teachers

- Improved clarity of voice and understanding
- Reduced voice strain, illness and stress
- Less repetition required
- Assists inclusive learning for SEN students

SEN Students

- Assists inclusive learning
- Easily integrates with induction loop systems
- Proven learning improvements for pupils with ADHD
- Many children with Down's syndrome who have fluctuating conductive hearing loss perceive significantly more speech

Should you have any problems or queries regarding your Soundfield System, please contact the system installer or our technical support department on T: 0115 9770075 or E: service@cie-group.com.

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Using individual pieces of equipment

Microphone Transmitters:
Belt Pack & Hand Held options are available, both of which are powered by rechargeable batteries. It is most important to adopt the correct charging regime otherwise the performance may suffer (a separate section covers this aspect - see pg7).

All of your microphone transmitters will operate in any of your classrooms featuring a Soundfield System. Two different fixed frequencies are available; your installer will have selected the best combination frequencies for the installation at the school. If you have been supplied with two transmitters for use in your classroom they will have been set to operate simultaneously.* As the system uses infrared technology, the transmitters will only work in the classroom within sight of the detectors. They will not work in the corridors, staff rooms or other adjacent areas. You should note that the transmitters require clean line of sight to one of the detectors to work reliably so care needs to be taken to ensure a clear path exists which is not obscured in any way (remember this includes ensuring infrared emitters are not obstructed by clothing).

IWM-302 Belt Pack Transmitter with IT-10X or IT-11X Infrared Emitter:
This system is intended to be used to reinforce the teacher's voice. The belt pack can be worn in any comfortable location, for example clipped to a belt or kept in a pocket. The infrared emitter must be worn in a position with a clear line of sight view to the detectors. The On/Off switch is located on top of the beltpack; operation is indicated by a green L.E.D. which turns red when the batteries are running out and require recharging (see section on chargers and batteries - pg7).

Soundfield is not intended as a public address system, rather to reinforce the teacher's voice to a clear, yet unobtrusive level. To set the volume level, use the rotary control on top of the beltpack. If you encounter whistling or similar strange sounds this will almost certainly be caused by acoustic feedback and will stop if the volume is reduced.

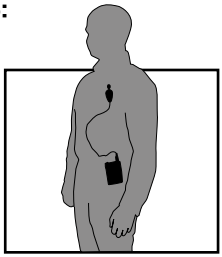
- IWM-302 Beltpack Transmitter and IR Emitter

*N.B. Only 2 transmitters - one on each frequency - can be used in any classroom.

YOUR BELTPACK TRANSMITTER WILL BE CONNECTED TO ONE OF THE FOLLOWING EMITTER/MICROPHONE OPTIONS:

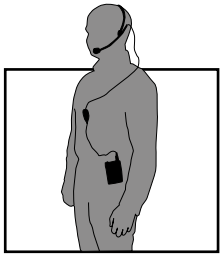
IT-10+ IR Emitter with built-in Lapel Microphone (Standard):
The IT-10x Emitter has an integral microphone and can be used with either a neck lanyard or the clothing clip provided. It should be worn in a comfortable position 15~20cm from the mouth.

The foam windshield fitted on the microphone is an important feature which should not be removed; it should be replaced if damaged or lost.



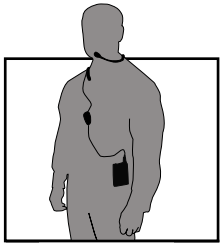
IT-11X IR Emitter (Optional):
The IT-11X has a socket to facilitate the connection of several types of microphone (see below). Note, the plug on the microphone is different to the plug on the emitter to prevent the microphone being connected directly to the belt pack.

MC-72X Headset Microphone (Optional):
Head worn unit. The microphone boom should be positioned so the microphone capsule is in the region of 1 to 2 inches (2.5~5cm) away, but not directly in front of your mouth. You may need to experiment to obtain the clearest sound. Do not use the microphone without the wind shield.



• MC-72X Headset Microphone

MC-75X Collar Microphone (Optional):
A lightweight microphone which is worn around the neck. It is both comfortable to wear and very efficient. Position the microphone to one side of your mouth, not directly in front as this will accentuate breath noise. Do not use without the foam wind shield as this will also cause breath noise.



• MC-75X Collar Microphone

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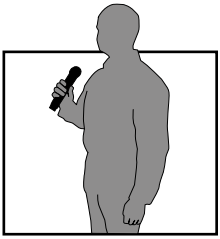
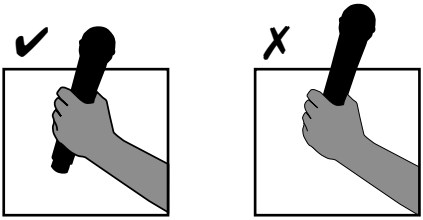
Using the handheld equipment

IWH-301 Hand Held Microphone:
These are intended primarily as a 'roaming' microphone for pupil interaction.

Other than an On/Off switch, the handheld microphone option has no other controls. Operation is indicated by a green L.E.D. which changes to red when the batteries are running low and require re-charging (see section on chargers and batteries - pg7). You will find the microphone is very sensitive, talk in a normal voice holding the microphone at a distance of 6 to 8 inches (15 ~ 20cm) away from your mouth.





- Hold in the middle to avoid blocking the emitters on the bottom of the handheld mic.

Battery Charging

It is vitally important that the correct regime is adopted with regard to battery charging if the performance of the system is to be maintained. In normal use fully charged batteries will power the transmitters for approximately 4 hours. Batteries will re-charge within 1 hour using the supplied charger.

• HC-33 Universal Drop-in charger for Beltpack Transmitter and Handheld Microphone/Transmitter

Before charging either transmitter, please ensure that the batteries are installed the correct way around (pos-pos/neg-neg). Inserting the batteries the wrong way around will result in failure of/damage to the microphone transmitter. This is not covered under warranty.

The HC-33 is a universal Drop-in Charger for both the IWM-302 Beltpack Transmitter and the IWH-301 Handheld Mic/Transmitter.

The ‘charging’ LED will show red when charging, changing to green when fully charged.

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IRX Wallmount IR Receiver/Amplifier

The IRX has been specifically developed for Soundfield application and is a user friendly unit featuring integrated infrared receiver and amplifier in one.

Designed to be positioned at the front of the classroom (ideally adjacent to the whiteboard), the case of the IRX has been carefully designed with no sharp corners and no easy access points, ensuring children and vulnerable people cannot tamper with the system.

The IRX and complete Soundfield system will have been set up by the installer, so no adjustment of the system may be needed. However, should the use of the system / classroom usage change or additional audio signals be added to the system, then a degree of adjustment may be required.

IRX Level Controls:

The main level controls of the unit (i.e. microphone and audio signal volume and tone control) and LED indicators can be accessed underneath the sliding perspex cover on the front of the unit.

The main power switch for the system is on the base of the unit. When the system is switched on, the red POWER LED will illuminate. Operation of the microphone transmitter(s) is signified by the 2 red LEDs on the left of the control panel marked 'ChA' and 'ChB'. If a single microphone transmitter is in use only one LED will illuminate; if 2 mic. transmitters are in use, both Channel LEDs will light.

Line Level Control:
The rotary control labelled 'Line Level' sets the default maximum volume of any AV inputs (eg. CD, MP3 or DVD player). Normal day-to-day volume control, however, should be adjusted using the control of the player.

Microphone Level Control:
The rotary control labelled 'Mic Level' sets the default maximum volume of all user's microphones; this should be set to a level that enables everyone to hear what is being said, but not so loud that feedback occurs.

It is strongly recommended, however, that normal adjustment of the Microphone level (eg. for users with quieter or louder voices or particularly noisy classroom environments) is controlled from the microphone unit's own volume controls when possible.

Tone Controls:
The remaining 2 rotary controls adjust the High (treble) and Low (mid range) tones of the system's audio output and can be adjusted for optimum voice or music intelligibility.

Tamper-Proof Mains Supply Cable:
Please note that the IRX Unit's mains power supply cable features a highly tamper-proof 'IEC' connector which plugs into the base of the IRX, adjacent to the On/Off switch.

This mains connector (which would normally easily pull out with a standard IEC) is intentionally difficult to release from the IRX Unit and deters tampering and disconnection from the mains power supply.

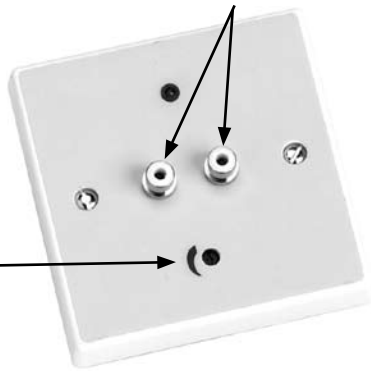
The IEC connector features a special red button with a clear plastic cover; to disconnect, this clear plastic cover needs to be 'snapped', then allowing the red button to be pressed down and the mains cable released.

Red button and clear plastic cover

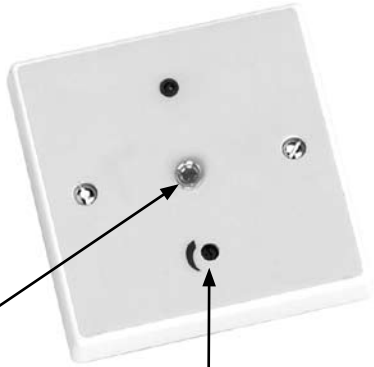
Additional Soundfield system facilities

Your Soundfield system may also include the following additional features:

1) AV Input Plate
This can be used to connect the sound from a laptop, CD, MP3 or DVD player, etc. to your Soundfield System for even sound coverage throughout the classroom. The AV sound will work in conjunction with the microphone signal. The AV input plate features 2 phono connectors and a volume control.



2) Assisted Hearing Radio Aid Output Plate
This allows hearing impaired students who use a personal radio aid system to be linked directly to the Soundfield system, providing greater levels of voice clarity and a more inclusive learning environment. The Radio Aid Output Plate features a 3.5mm 2-pole jack socket and volume control.



Notes

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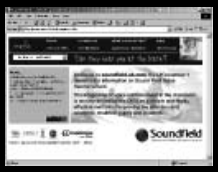
For further information on the use and benefits of Soundfield Classroom Voice Reinforcement, visit us on-line at:



www.soundfield.uk.com

With a range of highly effective, low cost solutions we have already supplied many successful Soundfield systems throughout the country, whilst our specially-developed website - **www.soundfield.uk.com** - has become the industry recognised site for information and advice on classroom voice reinforcement and the recommendations of Building Bulletin '93.

Effective relief for teachers' sore throats...

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Soundfield
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